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EXAMINER	
GRABOWSKI, KYLE ROBERT	

ART UNIT	PAPER NUMBER
3725	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

Office Action Summary	Application No.	Applicant(s)	
	10/575,367	ROSSET, HENRI	
	Examiner	Art Unit	
	Kyle Grabowski	3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 December 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4,9,10,12-17,23 and 25-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4,9,10,12-17,23 and 25-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 40 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1, 4, 9-10, 12, 14-16, 23, and 40-41, are rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al. (US 5,565,276) in view of Detrick et al. (US 5,161,829).

4. In respect to claims 1, 4, 23, and 40-41, Murakami et al. disclose a security paper comprising two fibrous paper plies: a first ply 20 and a second ply 10 (Col. 6, 60-65, Fig. 5); the first ply 20 (“substrate sheet") may contain a first authentication element such as dyed (colored) fibers (Col. 7, 10-14); the second ply 10 may contain a second authentication element such as nacreous pigments (i.e. iridescent particles) present solely in the second ply 10 in the form of flakes (Col. 11, 17-19, Fig. 5). Muraki et al. does not explicitly disclose that the colored fibers present as the first authentication element in first ply 20 are not present in ply 10, however Detrick et al. teach a similar two ply security paper wherein additives such as dyes, pigments etc. (Col. 4, 10-14) may be provided such that mechanical, optical, properties of each individual layer is different (Col. 3, 36-40) and it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide colored fibers solely in layer 20, to provide a desired characteristic or necessary effect in layer 20. The claim would have been obvious because a particular known technique was recognized as part of the ordinary capabilities of one skilled in the art. The only deficiency in Murakami et al. is not explicitly disclosing whether the colored fibers may be provided in ply 20 and **not** ply 10, and looking to Detrick et al. one could provide a desired effect (color effect) to either layer, without necessitating the color effect in both layers.

5. In respect to claims 9 and 10, the nacreous pigments also act as a reinforcing element in addition to their authentication function (providing a rigid material acts at least in some respect may constitute a reinforcing element).

6. In respect to claims 12 and 14, the first ply 20 and second ply 10 are paper plies (Col. 6, 62) and may be made of a paper-making pulp such as cotton (Col. 4, 48) and used as banknotes (Col. 12, 3-9).

7. In respect to claims 15 and 16, although Murakami et al. does not explicitly disclose a wet-assembly process, because the claims are dependent on an apparatus claim, limitations drawn to a product-by-process are defined by the product. Regardless, Detrick et a. does teach a wet assembly wire process (Col. 4, 35-43).

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al. (US 5,565,276) in view of Detrick et al. (US 5,161,829), as applied to claim 1 above, and further in view of Williams (US 3,880,706). Murakami et al. substantially disclose the claimed subject matter for the reasons stated above, including a three ply layer, but do not disclose an intermediate layer between plies 10 and 20 having reinforcing properties however Williams discloses providing a polyamide layer between to paper plies (Abstract) and it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a third intermediate layer between the first and second plies in view of Williams to protect against delamination between the layers (Col. 1, 39-46).

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al. (US 5,565,276) in view of Detrick et al. (US 5,161,829), as applied to claim 1 above, and further in view of Schmitz et al. (US 6,491,324). Murakami et al. substantially disclose the claimed subject matter for the reasons stated above including utilizing a security thread as an additional authentication element (Col. 7, 13) but do not disclose a magnetic layer, for example, that would react to microwave electronic fields however Schmitz et al. disclose a banknote utilizing a security thread having a magnetic layer (Abstract) and it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the security thread taught in Murakami et al. with magnetic properties to allow the security thread to be mechanically testable (Abstract, Schmitz et al.)

10. Claims 25-30, 33, and 35, are rejected under 35 U.S.C. 103(a) as being unpatentable over Doublet et al. (US 6,402,888) in view of Detrick et al. (US 5,161,829).

11. In respect to claims 25 and 35, Doublet et al. disclose a first ply 5 having a first authentication element, a watermark as a non-zero thickness feature, and a second ply 3. Either ply may be made of a synthetic or natural fibers, with any desired additives known in the art (Col. 1, 18-22, Fig. 3) to be used as a banknote. Doublet et al. does not disclose that the second ply 3 has additives such as a reinforcing element however Detrick et al. disclose a similar two-ply security paper wherein the nature and composition of each paper layer 10 and 16 may "be different to achieve desired or necessary effects in the resulting lamination" (Col. 3, 36-40), including different

combinations of synthetic fibers (Col. 3, 54-56) or wet strength enhancers (Col. 4, 10-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide either layer (e.g. the second ply) of the two ply paper taught in Doublet with wet strength enhancers not contained in the other layer in view of Detrick et al. to impart desired characteristics to either individual paper layer. The claim would have been obvious because a particular known technique was recognized as part of the ordinary capabilities of one skilled in the art. In looking to Detrick et al., one of ordinary skill would realize that either layer could be solely incorporated with wet strength enhancers absent from the other ply, to provide a desired characteristic, wet strength to a particular side of the finished ply.

12. In respect to claims 28 and 29, Doublet et al. further disclose that the second ply 3 may be imbedded with iridescent particles, a second authentication feature (Col. 5, 52-55).

13. In respect to claim 30, Doublet et al. further disclose that the first ply 5 may be significantly thicker than the second ply 3 (Fig. 3).

14. In respect to claim 33, Doublet et al. does not disclose the plies comprising cotton however Detrick et al. discloses that cotton is a suitable natural material (Col. 3, 54-56) and it would have been obvious to one of ordinary skill in the art at the time the invention was made to select cotton as a suitable material because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

15. In respect to claims 36-39, Doublet et al. further disclose that the plies are assembled wet via cylinder mold machines with watermark wire (Abstract).

16. Claims 26 and 27 rejected under 35 U.S.C. 103(a) as being unpatentable over Doublet et al. (US 6,402,888) in view of Detrick et al. (US 5,161,829) as applied to claim 25 above, and further in view of Bakken et al. (US 2002/011830). Doublet et al. as modified by Detrick et al. discloses providing strengthening fibers e.g. synthetic fibers in a single ply not contained in the other ply, but does not specifically disclose polyester fibers however Bakken et al. discloses providing polyester fibers for strength (0057) and it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the suitable synthetic fibers taught in Doublet et al. as modified by Detrick as polyester fibers (e.g. PET) since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

17. Claims 31 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doublet et al. (US 6,402,888) as modified by Detrick et al. (US 5,161,829) as applied to claim 25 above, and further in view of Williams (US 3,880,706).

18. Doublet et al. as modified by Detrick et al. substantially disclose the claimed subject matter for the reasons stated above including providing multiple laminated layers (Col. 3, 31-33, Detrick et al.) but do not disclose three plies, the middle ply comprising a reinforcing element however Williams discloses providing a polyamide

layer between to paper plies (Abstract) and it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the paper taught in Doublet et al. with a third intermediate layer between the first and second plies in view of Williams to protect against delamination between the layers; the reinforcing layer may be detected under light (authentication feature) (Col. 1, 39-46).

19. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doublet et al. (US 6,402,888) as modified by Detrick et al. (US 5,161,829), as applied to claim 20, and further in view of Nordic Pulp and Paper Research. Murakami and Doublet et al. substantially disclose the claimed subject matter for the reasons stated above but do not disclose the tear strengths of any of the fibrous paper plies, however a tear index of 10 mNm^2/g is dependent upon the material one selects from Murakami et al. as the second ply. Nordic Pulp and Paper show that a pulp such as pine kraft have a tear index above 10 mNm^2/g for all brands listed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a pine kraft pulp to insure that the tear index was higher than 10 mNm^2/g. Also, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended

Response to Arguments

21. The declaration under 37 CFR 1.132 has been read and considered.

22. Applicant's arguments, see Remarks, filed on 12/01/10, with respect to claims 1, 4, and 14-16, have been fully considered and are persuasive. The 35 USC 102 rejection has been withdrawn. The examiner agrees that it is impermissible to call the separate particles fluorescent since they are not fluorescent before reacting after their combination.

23. Applicant's arguments in regards to the 35 USC 103 rejection of claim 1 and dependents, have been fully considered but they are not persuasive. The language has been used to amend particles into planchettes, to obviate Murakami et al. however Murakami et al. also discloses colored fibers (see above). Furthermore, the applicant argues that "Detrick is too general to be relevant, because it does not indicate any specific reason to modify a security paper in any particular manner" however the examiner disagrees, because Detrick explicitly states an advantage in separating different dyes/fibers in different layers such that mechanical, optical, properties of each individual layer is different (Col. 3, 34-40). The examiner does believes one of ordinary skill in the art would see an advantage of separating the colored fibers and nacreous pigments (thus providing the colored fibers in paper layer 20) so that the different layers can have individual properties.

24. Applicant's arguments in regards to the 35 USC 103 rejection of claims 25 and dependents have been fully considered but they are not persuasive. The applicant contends that "Detrick is completely silent about any reason why a person of the art should add reinforcing fibers that as such that the paper would have a mechanical strength higher than a mechanical strength of a paper having identical weight in g/m^2

and identical composition except without the reinforcing element" however examiner disagrees. Again, Detrick teaches that it is desirable to alter individual characteristics of each layer, including adding reinforcing fibers (wet strength fibers still reinforce). Detrick explicitly teaches that the desired strength of either layer may be altered depending on the desired result (Col. 3, 46-53). The examiner further submits that the broad interpretation of "reinforcing fibers" as "wet strength enhancers" is appropriate in that the fibers reinforce the substrate during wetting.

Conclusion

25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyle Grabowski whose telephone number is (571)270-3518. The examiner can normally be reached on Monday-Thursday, 9am - 7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dana Ross can be reached on (571)272-4480. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kyle Grabowski/
Examiner, Art Unit 3725

/Dana Ross/
Supervisory Patent Examiner, Art Unit 3725